

## Trend Study 9-10-00

Study site name: Toliver Creek Chaining.

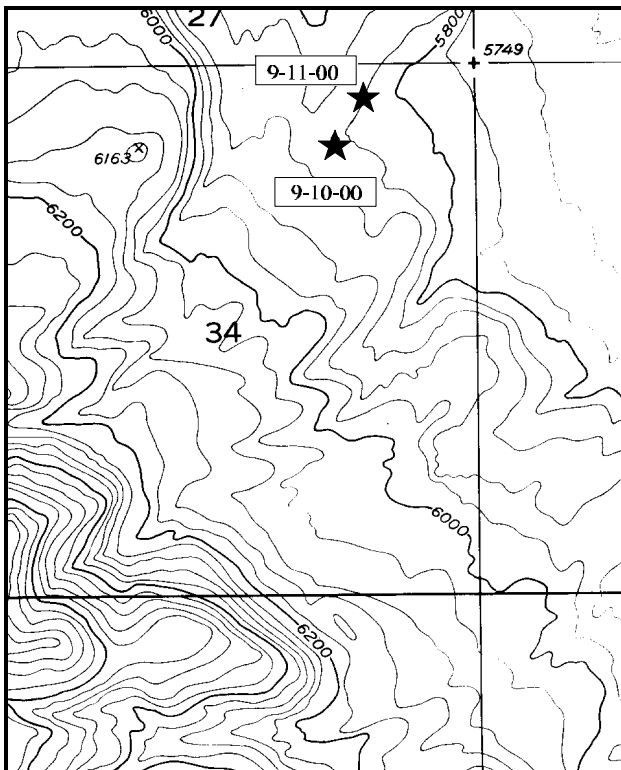
Range type: Chained, Seeded P-J.

Compass bearing: frequency baseline 189°M.

First frame placement on frequency belts 5 feet. Frequency belt placement; line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft.), line 4 (71ft).

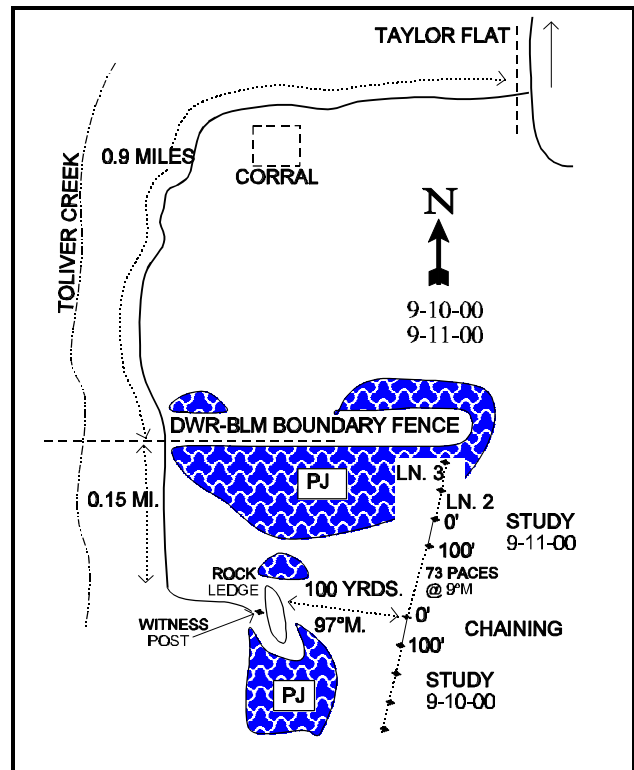
### LOCATION DESCRIPTION

From the north side of the Green River at the Taylor Flat bridge, go south across the river 1.75 miles. Turn right and go through a gate. Go 0.2 miles to a gate by a corral. Continue south and west 0.7 miles to the DWR-BLM boundary fence. Go through the gate and continue 0.15 miles to the end of the road. There is a P-J covered, rocky ledge about 75 feet east. From the ledge, walk 60 paces SE into the chaining to a short green fencepost tagged #909 which marks the start of the frequency baseline.



Map Name: Warren Draw

Township 2N, Range 24E, Section 34



Diagrammatic Sketch

UTM 4525857.827 N, 652611.654 E

## DISCUSSION

### Trend Study No. 9-10 (11-11)

The Toliver Creek Chaining study was established in 1988 to monitor a large pinyon-juniper chaining completed during the fall of 1986. It was two-way chained and seeded with grasses, forbs, and shrubs. This area is managed by the BLM and as with all of the Browns Park area, is considered critical deer winter range. Another study was established in the adjacent undisturbed pinyon-juniper stand to provide comparative baseline data for species composition and trend assessment. The study site is located in the foothills above Taylor Flat. The study site has a northern aspect with a slope of 3-4% and lies at an elevation of 5,900 feet. Animal use of the site appears light, although quadrat frequency of elk and deer pellets increased between 1995 and 2000. Pellet group transect data taken along the baseline in 2000 estimate 25 deer days use/acre (62 ddu/ha) and 7 elk days use/acre (17 edu/ha). Livestock use appears light as well with an estimated 2 cow days use/acre (5 cdu/ha) in 2000. This area is in the Taylor Flat allotment which is usually grazed in the spring from April 1 to May 31 for 1,000 AUM's.

The sandy loam soils are fairly shallow and extremely rocky. Estimated effective rooting depth is just over 7 inches, while penetrometer readings used to estimate a profile stoniness index showed nearly all probes hit rocks within the first 5 inches of the soil surface. Rock cover on the surface is high at 22%. Although rocky, this soil does support mountain big sagebrush suggesting that the rock here is of a cobbly nature and does not prohibit root penetration. Vegetation and litter cover have been adequate to prevent serious erosion, although both decreased in 2000 while bare ground increased. These changes in ground cover characteristics are due to drought. This should improve with better precipitation in the future.

Due to the shallow, rocky nature of the site, the control of pinyon and juniper by chaining was close to 100%. Few seedlings were observed and none were sampled in the density plots of 1988. Point-center quarter data from 2000 estimate 38 juniper and 12 pinyon trees/acre. Average diameter of juniper is 2.4 inches, while that of pinyon is only 1.5 inches. Fifteen percent of the juniper and 5% of the pinyon trees sampled consisted of live mature tipped trees which were not eradicated by the chaining treatment.

Browse are not abundant on the site with all species combining to contribute to just over 3% average cover in 2000. Mountain big sagebrush, fourwing saltbush, and rubber rabbitbrush do provide some forage. Currently, mountain big sagebrush density is estimated at 520 plants/acre, an increase from 380 plants/acre in 1995. Currently ('00), big sagebrush has good vigor, low decadency, and good recruitment from young plants at 12%. Use is light and average annual leader growth is 5 inches in 2000. Fourwing saltbush is estimated at 120 plants/acre in 2000 with the population consisting solely of mature plants. Use is light to moderate, vigor normal, with no decadent plants. Leader growth on fourwing averages 5 inches in 2000. Currently ('00), white-stemmed rubber rabbitbrush is estimated at 260 plants/acre, an increase from 60 plants/acre in 1995. Although this species is not always an important forage source, it is palatable to browsing animals and may be more important at this site due to the lack of a well developed shrub component. Use on rubber rabbitbrush is light, vigor good, and decadency is low at 8%.

Increaser species, including prickly pear and broom snakeweed, are present but only snakeweed has increased in abundance since 1988.

The herbaceous understory is limited. Cheatgrass is well established and was the dominant understory species in 1995. With drought conditions in 2000, cheatgrass is still abundant, but significantly decreased in nested and quadrat frequencies. Cheatgrass also has greatly reduced stature in 2000, resulting in a large decrease in average cover from 22% in 1995 to 4% in 2000. A good mix of seeded and native perennial grasses are present on the site, but most remain infrequent. Crested wheatgrass significantly increased in nested frequency between

1995 and 2000, and is currently ('00) the dominant grass. Crested wheatgrass was mostly dried up when the site was read in July of 2000. It exhibited moderate to heavy use. Average cover for crested wheatgrass, even with use, is presently estimated at nearly 10%. Other perennial grasses that have been sampled include: bluebunch wheatgrass, intermediate wheatgrass, orchard grass, needle-and-thread and Sandberg bluegrass. As a group, perennial grasses increased in sum of nested frequency in 2000 due mostly to the increase in crested wheatgrass. Forbs are scarce, especially in 2000 with drought. All forbs combined provide less than 1% average cover in 2000, a decrease from 4% in 1995. Annual forbs were nearly non-existent in 2000, while perennial forbs decreased in sum of nested frequency by 75%. Eighteen species of forbs were sampled in 1995, decreasing to only 6 in 2000.

#### 1988 APPARENT TREND ASSESSMENT

Large rocks are prominent on the surface and account for 23% of the ground cover. Debris from the chaining provides a substantial amount of surface litter cover (54%). Percent bare ground is moderately high at 28%. Trend for soil appears stable at this time. There are low densities of shrubs on the site, but fourwing saltbush and mountain big sagebrush should increase in time. The herbaceous understory contains a good variety of seeded and native grasses although annual cheatgrass is currently the most abundant grass. Trend for grasses and forbs is improved from pre-chained conditions, however the abundance of annual grasses and forbs is a concern.

#### 1995 TREND ASSESSMENT

Ground cover characteristics have improved since the chaining. Currently, there is only 5% bare soil and litter cover has remained moderately high at 54%. Trend for soil is up. The browse trend is improved for sagebrush and fourwing saltbush. One negative aspect is the increase of broom snakeweed which has increased 90% since 1988. However, the population appears to be stabilizing with a mostly mature plants and a much lower biotic potential (percent of seedlings to mature population). The herbaceous trend is down due to the dominance of annual grasses and forbs. Cheatgrass makes up 80% of the grass cover and 62% of the total vegetative cover. Annual forbs account for 39% of the forb cover. Drought conditions since 1987 have intensified this condition. Two perennial seeded grasses, crested and intermediate wheatgrass, did increase significantly in nested frequency since the last reading. These and other perennial grasses should eventually gain dominance of this site.

#### TREND ASSESSMENT

soil - up (5)

browse - improved but still in small numbers (4)

herbaceous understory - down due to the over dominance of annuals (1)

#### 2000 TREND ASSESSMENT

Trend for soil is slightly down. Bare ground increased from 5% to 22% and vegetation and litter cover both decreased. These changes in ground cover are due to drought and should reverse in the future with normal precipitation. Trend for browse is slightly up as mountain big sagebrush slightly increased in density, has good vigor and low decadency. Recruitment from young sagebrush plants is also good at 12%. Fourwing saltbush remains stable, even though no young plants were sampled in 2000. However, drought conditions make it difficult for young shrubs to establish and persist. Normal precipitation in the future will hopefully increase the number of young sagebrush and fourwing plants at this site, resulting in population increases. Trend for the herbaceous understory is slightly up as crested wheatgrass significantly increased in nested frequency, while cheatgrass significantly decreased in nested frequency. The understory is still limited and forbs are scarce.

# TREND ASSESSMENT

soil - slightly down (2)

browse - slightly up (4)

herbaceous understory - slightly up (4)

## HERBACEOUS TRENDS --

Herd unit 09 , Study no: 10

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'88	'95	'00	'88	'95	'00	'95	'00
G	Agropyron cristatum	<sub>a</sub> 84	<sub>b</sub> 165	<sub>c</sub> 248	42	66	82	4.30	9.80
G	Agropyron intermedium	3	25	21	2	8	8	.55	.38
G	Agropyron spicatum	<sub>a</sub> -	<sub>a</sub> 4	<sub>b</sub> 25	-	2	9	.03	.17
G	Aristida purpurea	-	-	-	-	-	-	.03	-
G	Bromus tectorum (a)	<sub>b</sub> 210	<sub>c</sub> 363	<sub>a</sub> 147	80	100	57	22.82	4.74
G	Dactylis glomerata	<sub>b</sub> 73	<sub>a</sub> 16	<sub>a</sub> 22	33	8	13	.16	.71
G	Oryzopsis hymenoides	<sub>b</sub> 17	<sub>a</sub> -	<sub>a</sub> 2	8	-	1	-	.03
G	Poa secunda	11	1	6	5	1	2	.00	.01
G	Sitanion hystrix	<sub>b</sub> 33	<sub>a</sub> -	<sub>a</sub> -	15	-	-	.00	-
G	Sporobolus cryptandrus	2	6	1	1	2	1	.01	.00
G	Stipa comata	<sub>a</sub> -	<sub>b</sub> 20	<sub>b</sub> 11	-	7	5	.69	.11
G	Unknown grass - perennial	<sub>b</sub> 39	<sub>a</sub> -	<sub>a</sub> -	16	-	-	-	-
G	Vulpia octoflora (a)	-	<sub>b</sub> 22	<sub>a</sub> 4	-	8	2	.06	.01
Total for Annual Grasses		210	385	151	80	108	59	22.89	4.75
Total for Perennial Grasses		262	237	336	122	94	121	5.79	11.23
Total for Grasses		472	622	487	202	202	180	28.68	15.98
F	Calochortus nuttallii	<sub>a</sub> -	<sub>b</sub> 5	<sub>a</sub> -	-	3	-	.01	-
F	Chenopodium album (a)	<sub>b</sub> 7	<sub>a</sub> -	<sub>a</sub> -	5	-	-	-	-
F	Chenopodium spp. (a)	<sub>b</sub> 22	<sub>a</sub> -	<sub>a</sub> -	11	-	-	-	-
F	Cymopterus longipes	<sub>a</sub> -	<sub>b</sub> 3	<sub>ab</sub> 4	-	3	2	.01	.01
F	Descurainia pinnata (a)	<sub>b</sub> 19	<sub>b</sub> 20	<sub>a</sub> -	11	8	-	.44	-
F	Draba reptans (a)	<sub>b</sub> 7	<sub>c</sub> 83	<sub>a</sub> -	4	31	-	.23	-
F	Erodium cicutarium (a)	-	<sub>b</sub> 26	<sub>a</sub> 6	-	9	2	.41	.01
F	Gilia spp. (a)	-	<sub>b</sub> 18	<sub>a</sub> -	-	11	-	.05	-
F	Lappula occidentalis (a)	-	1	-	-	1	-	.00	-
F	Lactuca serriola	<sub>a</sub> -	<sub>b</sub> 70	<sub>a</sub> -	-	35	-	.30	-
F	Lepidium densiflorum (a)	-	<sub>b</sub> 7	<sub>a</sub> -	-	3	-	.01	-
F	Leucelene ericoides	37	40	24	19	19	11	.73	.18
F	Machaeranthera canescens	-	4	-	-	2	-	.01	-
F	Melilotus officinalis	-	7	-	-	2	-	.21	-

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'88	'95	'00	'88	'95	'00	'95	'00
F	Medicago sativa	c <sub>24</sub>	b <sub>9</sub>	a <sup>-</sup>	13	3	-	.34	-
F	Phlox hoodii	-	6	1	-	2	1	.06	.00
F	Sanguisorba minor	b <sub>5</sub>	a <sup>-</sup>	a <sup>-</sup>	3	-	-	-	-
F	Sisymbrium altissimum (a)	-	b <sub>50</sub>	a <sub>2</sub>	-	22	1	.48	.00
F	Sphaeralcea coccinea	a <sup>-</sup>	b <sub>23</sub>	b <sub>13</sub>	-	10	6	.71	.05
F	Tragopogon dubius	a <sup>-</sup>	b <sub>6</sub>	a <sup>-</sup>	-	3	-	.04	-
F	Unknown forb-annual (a)	b <sub>7</sub>	a <sup>-</sup>	a <sup>-</sup>	3	-	-	-	-
F	Unknown forb-perennial	b <sub>9</sub>	ab <sub>3</sub>	a <sup>-</sup>	4	1	-	.15	-
Total for Annual Forbs		62	205	8	34	85	3	1.64	0.01
Total for Perennial Forbs		75	176	42	39	83	20	2.59	0.24
Total for Forbs		137	381	50	73	168	23	4.24	0.26

Values with different subscript letters are significantly different at % = 0.10

#### BROWSE TRENDS --

Herd unit 09 , Study no: 10

T y p e	Species	Strip Frequency		Average Cover %	
		'95	'00	'95	'00
B	Artemisia tridentata vaseyana	6	8	.33	.98
B	Atriplex canescens	5	5	.15	.66
B	Chrysothamnus depressus	0	3	-	.15
B	Chrysothamnus nauseosus hololeucus	3	5	.41	-
B	Chrysothamnus viscidiflorus viscidiflorus	0	1	-	-
B	Echinocereus spp.	0	1	-	-
B	Gutierrezia sarothrae	35	32	1.61	.38
B	Juniperus osteosperma	0	5	.96	.73
B	Opuntia spp.	21	27	.57	.25
B	Pinus edulis	0	1	-	-
Total for Browse		70	88	4.03	3.16

BASIC COVER --

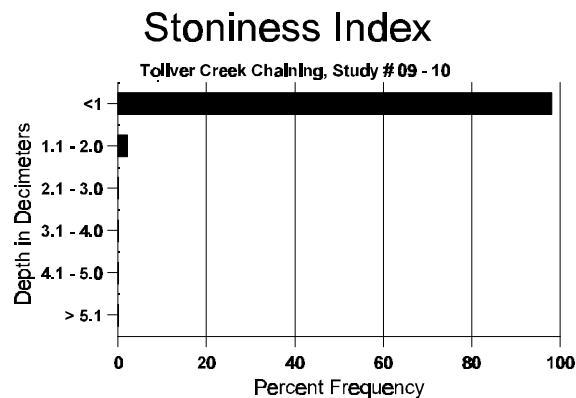
Herd unit 09 , Study no: 10

Cover Type	Nested Frequency		Average Cover %		
	'95	'00	'88	'95	'00
Vegetation	376	320	3.00	38.45	21.76
Rock	268	270	12.25	22.84	22.35
Pavement	94	146	1.50	.37	1.22
Litter	392	353	54.75	54.20	42.52
Cryptogams	24	96	0	.09	1.69
Bare Ground	157	255	28.50	5.06	22.23

SOIL ANALYSIS DATA --

Herd Unit 09, Study # 10, Study Name: Toliver Creek Chaining

Effective rooting depth (inches)	Temp °F (depth)	pH	%sand	%silt	%clay	%OM	PPM P	PPM K	dS/m
7.39	68.8 (8.35)	7.3	69.4	17.0	13.6	4.5	14.3	288.0	0.9



PELLET GROUP FREQUENCY --

Herd unit 09 , Study no: 10

Type	Quadrat Frequency		Pellet Transect	
	'95	'00	Pellet Groups per Acre	Days Use per Acre (ha)
			'00	'00
Rabbit	18	35	244	N/A
Elk	7	23	87	7 (17)
Deer	12	13	339	26 (65)
Cattle	3	5	26	2 (5)

## BROWSE CHARACTERISTICS --

Herd unit 09 , Study no: 10

Artemisia tridentata vaseyana																			
S	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total	
		1	2	3	4	5	6	7	8	9	1	2	3	4					
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	95	-	-	-	6	-	-	-	-	-	6	-	-	-	120			6	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
Y	88	1	-	-	-	-	-	-	-	-	-	1	-	-	33			1	
	95	4	-	-	10	-	-	-	-	-	14	-	-	-	280			14	
	00	3	-	-	-	-	-	-	-	-	3	-	-	-	60			3	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	
	95	3	2	-	-	-	-	-	-	-	5	-	-	-	100	13	16	5	
	00	22	-	-	-	-	-	-	-	-	22	-	-	-	440	14	18	22	
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1	
% Plants Showing		<u>Moderate Use</u>				<u>Heavy Use</u>				<u>Poor Vigor</u>				<u>%Change</u>					
'88		00%				00%				00%				+91%					
'95		11%				00%				00%				+27%					
'00		00%				00%				00%									
Total Plants/Acre (excluding Dead & Seedlings)														'88	33	Dec:	0%		
														'95	380		0%		
														'00	520		4%		
Atriplex canescens																			
S	88	4	-	-	-	-	-	-	-	-	4	-	-	-	133			4	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
Y	88	4	-	-	-	-	-	-	-	-	4	-	-	-	133			4	
	95	2	-	-	-	-	-	-	-	-	2	-	-	-	40			2	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0	
	95	6	-	-	-	-	-	-	-	-	6	-	-	-	120	27	36	6	
	00	3	1	-	2	-	-	-	-	-	6	-	-	-	120	28	37	6	
% Plants Showing		<u>Moderate Use</u>				<u>Heavy Use</u>				<u>Poor Vigor</u>				<u>%Change</u>					
'88		00%				00%				00%				+17%					
'95		00%				00%				00%				-25%					
'00		17%				00%				00%									
Total Plants/Acre (excluding Dead & Seedlings)														'88	133	Dec:	-		
														'95	160		-		
														'00	120		-		

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Chrysothamnus depressus																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	-	1	-	-	20		1	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	00	2	-	-	-	-	-	-	-	-	-	2	-	-	40	2	8	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%										
'95		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	-			
												'95	0		-			
												'00	60		-			
Chrysothamnus nauseosus hololeucus																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	9	-	-	-	-	-	-	-	-	-	9	-	-	180		9	
M	88	1	-	-	-	-	-	-	-	-	1	-	-	-	33	11	8	
	95	3	-	-	-	-	-	-	-	-	3	-	-	-	60	28	31	
	00	3	-	-	-	-	-	-	-	-	3	-	-	-	60	34	44	
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%			+45%							
'95		00%			00%			00%			+77%							
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	33	Dec:	0%			
												'95	60		0%			
												'00	260		8%			
Chrysothamnus viscidiflorus viscidiflorus																		
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%										
'95		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	-			
												'95	0		-			
												'00	20		-			



A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Echinocereus spp.																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2	0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3	0	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%										
'95		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	-			
												'95	0		-			
												'00	20		-			
Gutierrezia sarothrae																		
S	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	4	-	-	-	-	-	-	-	-	4	-	-	-	80		4	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	5	-	-	-	-	-	-	-	-	5	-	-	-	100		5	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
M	88	6	-	-	-	-	-	-	-	-	6	-	-	-	200	4	6	
	95	91	-	-	-	-	-	-	-	-	91	-	-	-	1820	11	17	
	00	95	-	-	-	-	-	-	-	-	50	2	43	-	1900	4	7	
D	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	10	-	-	-	-	-	-	-	-	-	-	1	9	200		10	
X	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	200		10	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%			+90%							
'95		00%			00%			00%			+ 9%							
'00		00%			00%			50%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	200	Dec:	0%			
												'95	1920		0%			
												'00	2120		9%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Juniperus osteosperma																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	5	-	-	-	-	-	-	-	-	5	-	-	-	100		5	
M	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20	-	-	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%										
'95		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	-			
												'95	0		-			
												'00	120		-			
Opuntia spp.																		
S	88	2	-	-	-	-	-	-	-	-	2	-	-	-	66		2	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	88	16	-	-	-	-	-	-	-	-	16	-	-	-	533		16	
	95	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	00	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
M	88	10	-	-	1	-	-	-	-	-	11	-	-	-	366	4 12	11	
	95	27	-	-	-	-	-	-	-	-	27	-	-	-	540	3 12	27	
	00	32	-	-	1	-	-	-	-	-	30	3	-	-	660	3 8	33	
D	88	5	-	-	-	-	-	-	-	-	1	-	4	-	166		5	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			13%			-47%							
'95		00%			00%			00%			+22%							
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	1065	Dec:	16%			
												'95	560		0%			
												'00	720		3%			
Pinus edulis																		
Y	88	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	95	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	00	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'88		00%			00%			00%										
'95		00%			00%			00%										
'00		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'88	0	Dec:	-			
												'95	0		-			
												'00	20		-			